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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,629	06/24/2003	Hitesh Windlass	042390P15993	4736

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EXAMINER

TRINH, HOA B

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/603,629

Applicant(s)

WINDLASS ET AL.

Examiner

Vikki H Trinh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-9 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5 and 10-15 is/are rejected.
- 7) ☒ Claim(s) 3 and 6 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claims 1-12 are objected to because of the following informalities: In each of the claims 1-12, the term “or” in line 1 of each of the claims renders the claims ambiguous. In order to expedite the prosecution process of this application, the examiner interprets the claims 1-12 as though they were written as “A combination wafer, comprising” in this Office Action.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 4-5, and 10-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Bae (6,716,679).

Bae discloses a device and method of making a combination wafer. See abstract.

As to claims 1, 10, and 13, a combination wafer or microelectronic die, comprising, a substrate 100 (fig. 5B); a plurality of electronic elements 114, 142, 146, 130 (fig. 5B) formed in or on the substrate 100 (fig. 5B); a first set of alternating dielectric layers 190 (fig. 5B) and layers of metal lines 204a (fig. 5B) on the substrate 100, the first set having a first guard ring trench 214a (fig. 5B, fig. 3K) therein with a first width (fig. 5B); a first guard ring layer 300 (fig. 5B) formed on surfaces of the first guard ring trench; a second set of alternating dielectric layers

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210 (fig. 5B) and layers of metal lines 234a (fig. 3K) on the first set, the second set having a second guard ring trench therein, above the first guard ring trench and having a second width (fig. 5B) which is wider than the first width (fig. 5B); and a second guard ring layer 302 (fig. 5B) formed on surfaces of the second guard ring trench 216 (fig. 4, 5A).

As to claims 2 and 14-15, the combination further includes: (i) the first guard ring layer 300 (fig. 5B) is partially formed on a top surface of a layer of the first set; and (ii) the second guard ring layer 302 (fig. 5B) is partially formed on a top surface of the first guard ring layer 300 where the first guard ring layer is formed on the top surface of the layer of the first set. (fig. 5B).

As to claim 4, the lower ones 140, 150 (fig. 5B) of the dielectric layers of the first set include carbon (TEOS, col. 8, line 32) and an upper one of the dielectric layers 190 of the first set is made of a different material than the layers that include carbon (silicon dioxide; col. 9, line 1).

As to claim 5, the upper dielectric layer 190 of the first set includes substantially no carbon (silicon dioxide; col. 9, line 1).

As to claim 11, there are more guard ring layers formed on surfaces of a lower guard ring trench than on surfaces of an upper guard ring trench (see fig. 5B).

As to claim 12, each guard ring trench is substantially the same width into at least two of the dielectric layers 190, 210 (fig. 5B).

Allowable Subject Matter

3. Claims 3 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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4. Claims 7-9 are allowed.

5. The following is an examiner's statement of reasons for allowance: The prior art of record does not disclose or fairly suggest either in singly or in combination a combination wafer having a third set of alternating dielectric layers and layers of metal lines on the second set, the third set having a third guard ring trench therein, above the second guard ring trench and having a third width which is wider than the second width; and a third guard ring layer formed on surfaces of the third guard ring trench, including partially on a top surface of the second guard ring layer where the second guard ring layer is formed on the top surface of the upper layer of the second set and partially on a top surface of an upper layer of the third set, and other elements in the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

1. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Vikki Trinh whose telephone number is (571) 272-1719. The Examiner can normally be reached Mon-Tuesday, Thurs-Friday, 7:30 AM - 6:00 PM Eastern Time. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Wael Fahmy, can be reached at (571) 272-1705.

Vikki Trinh,
Patent Examiner
AU 2814

LONG PHAM
PRIMARY EXAMINER